Introduction:

Veterinary practices are presented with a diverse range of conditions. Some conditions, such as cases involving wound care, can be unpredictable in both the duration of recovery and the outcome. Patients may have to undergo a number of visits to the practice and experience a range of procedures in regards to the long term care of wounds including, but not limited to:

- Initial consultation
- Bandage/dressing changes
- Surgery
- Suture removal
- Aftercare and follow-up appointments

Some veterinary professionals believe that it is normal for pets to be scared whilst at the veterinary practice and Lloyd (2017) states that it has become customary to accept that negative responses to the veterinary environment are typical. As veterinary professions, veterinary nurses, should be creating positive patient experiences, to ensure that they are reducing patient stress and doing no harm. Utilising low-stress handling can avoid undesirable behaviours, provide a safer working environment and promote a higher standard of animal welfare.

Problems that can occur in patients receiving long-term care:

Mariti *et al.* (2016) discovered that dogs which were uncomfortable with their owners carrying out procedures at home would also be intolerant of the veterinary nurse or surgeon doing the same in the consultation room. The veterinary nurse can therefore have the advantage of determining which patients will need additional support throughout a bandage change on a sensitive area, such as the tail, by completing a thorough history with the client prior to undertaking the procedure. Throughout this time the veterinary nurse can phrase questions, such as "*How tolerant is he/she of you going near the wound*?" to determine their course of action. Preventing a negative experience from occurring is an essential role of the veterinary nurse (Edwards *et al*, 2019), and anything that can be done to prevent a stress response from escalating disproportionately during long term treatment will benefit the welfare of the animal.

Balsa & Culp (2015), Calder (2014) and Bellah (2006) explain that the success of a bandage can be limited by the movement of the area and the tension of the bandage applied. Immobilising the patient is therefore especially important because incorrect application can cause bandages to move (Bellah, 2006). This, when coupled with the fact that it could be an area that cannot be prevented from moving in itself can make for a challenging situation. Methods, such as, forcing the animal into unnatural positions via physical restraint should be avoided because they restrict patient choice (Ryan, 2018) therefore increasing the chances of an animal reacting adversely to the situation they find themselves in. Chemical restraint can be used to prevent the animal developing negative associations with the treatment (Hargrave, 2017) and Edwards *et al* (2019) found that chemical restraint can be more beneficial to some animals than manual restraint because it allows for improvements in their co-operation and

behaviour. Ultimately, however, it is imperative that the veterinary team find the best method of control for each individual patient whilst working in a calm and professional manner.

An aspect of successful wound management, in long-term cases, is the relationship between the patient, owner and veterinary team (Edwards, 2019). From the owner's point of view, a veterinary nurse who shows compassion and respect towards the pet must therefore understand the animal and its needs (Lloyd, 2017). It is imperative that veterinary nurses refer to their declaration (Table 1) and are constantly trying to reduce fear and anxiety in animals thus instilling a comfortable nurse-pet-client relationship (Lloyd, 2017). A visit to a veterinary environment can be extremely stressful for the animal (Arhant, 2019) and patients that repeatedly visit a practice because of long term treatment may develop anxiety. Anxiety can lead to undesirable behaviours developing in response to their experiences, for example, refusing to exit the car on arrival at the practice or withdrawing when the veterinary professional approaches. If these behaviours are left unchecked then they can become harder to train out at a later date and a qualified trainer/behaviourist may have to be sought.

Table 1: Declaration of Profession Registration (RCVS, 2019).

" I PROMISE AND SOLEMNLY DECLARE that I will pursue the work of my profession with integrity and accept my responsibilities to the public, my clients, the profession and the Royal College of Veterinary Surgeons, and that, ABOVE ALL, my constant endeavour will be to ensure the health and welfare of animals committed to my care."

When dealing with patients that are undergoing long-term treatment the veterinary team need to be aware of potential signs of stress. Knowledge of these stress signs and appropriate low-stress handling techniques are a vital aspect of the team's education to ensure that they are able to respond appropriately and skilfully in these situations. Low-stress handling can help towards maintaining relationships between the veterinary professional and the patients whilst the patient is adjusting to the novel environment they find themselves in, thereby preventing anxieties from becoming phobias (Figure 1). Lloyd (2017) explains that owners are often unwilling to put themselves or their pets through potentially stressful situations. The veterinary nurse is therefore ideally placed to endorse ways in which the animal's, and therefore the owner's, welfare (Lloyd, 2017) can be promoted and making procedures, such as bandage changes, more agreeable.

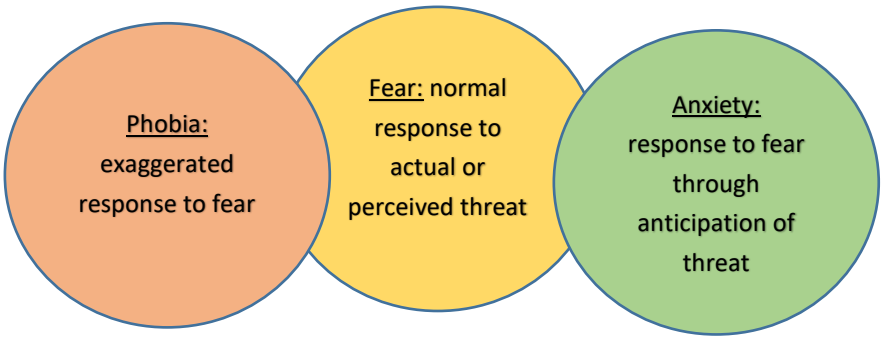

Figure 1: Definitions of stress responses

Signs of stress:

Overall (2013) emphasises that negative experiences in the veterinary practice can lead to long lasting anxiety in the patient. Reducing stress whilst undergoing treatment can therefore improve the welfare of patients, staff and owners (Edwards *et al*. 2019). Stress can present itself it many different ways (Table 2) and the effects it can have on the patient may vary. Stress can impair physical well-being and social relationships (animal and human) and reduce the animal's ability to relax (Hargrave, 2015). The physiology and psychology of the animal must be considered (Lloyd, 2017; Williams, 2016) because parameters and behaviours displayed, when undergoing long-term treatment, may not be 'normal' for that animal. It is also essential for the veterinary team to remember that an animal might be in pain, which on its own or coupled with anxiety can lead to unpredictable behaviours from the animal (Mariti *et al*. 2016), such as, aggression or avoidance and escape strategies. Muzzles or chemical restraint may therefore be necessary to safeguard those working with the patient. Interventions such as these must be assessed on an individual basis because each animal will respond differently and even the same animal's responses can vary from visit to visit. The veterinary team must always be aware of the importance of every interaction that the animal has in the practice and how undesirable behaviours can affect current and future visits (Hargrave, 2017). Hargrave (2017) and McMillan (2002) suggest that the way to minimise stress in animals is to make experiences as enjoyable as possible. Ryan (2018) suggests the use of positive reinforcement techniques and responding appropriately to the patient's emotional needs.

Table 2: Signs of anxiety in dogs (not exhaustive) (adapted from Yin, 2011).

Licking lips: when no food nearby.
Panting: when not hot or thirsty.
Brows furrowed and ears to the side.
Moving in slow motion.
Acting sleepy or yawning: when they shouldn't be tired.
Hyper-vigilant
Suddenly won't eat; but was hungry previously.
Moving away
Pacing.

Solutions:

Tail wounds can be particularly difficult to manage because of their vulnerable location and the fact that they can easily be contaminated by urine and faeces (Bellah, 2006). It is important therefore to ensure that the patient remains mentally stimulated so it does not begin interfering with the bandage due to boredom during recovery. Lick mats can be used in both the home and veterinary setting to distract patients whilst undergoing long term treatment. These can be placed on the wall or floor in front of the animal and covered with a palatable paste; allowing for treatment to occur with the minimum of fuss. Interactive feeders

filled with frozen or fresh fillings, such as peanut butter or soaked dog food, can also be used; they are not static and stable like lick mats and their use might therefore need additional supervision. Lick mats are preferable if the dog needs to be immobilised. The distraction provided by the food may also allow the low-stress handling to be established in a calm environment.

Patients should be given multiple opportunities to adapt to the new situation (McMillan, 2002) and mental stimulation can be a useful tool at this time. Devising short exercises that can be repeated throughout the day can keep the animal's mind active and stave off boredom. Equipment for these purposes can be prepared by the veterinary nurse in advance and includes grooming implements, feed puzzles and games (Jefferies, 2016; McMillan, 2002). Sprinkle feeding can provide more stimulation during feeding times for an animal on restricted exercise by not only making the actual activity of eating last longer, but also providing environmental enrichment to distract the patient from their wound (McMillan, 2002). During times of potential stress, the nurse can provide the patient with these mental stimulation activities to distract from the situation whilst conducting low-stress handling of the animal.

The owner should be considered throughout the treatment of the animal (Jefferies, 2016) to ensure their concordance and therefore hopefully a smoother and quicker recovery for the patient. Barry (2018) states that the education of owners by the veterinary team can dramatically increase compliance with treatment in relation to medical illnesses. This idea can be transferred to wound care and recovery by ensuring that the treatment is discussed fully with the owner (Barry, 2018). The veterinary nurse should understand their own role in the owner's education (Jefferies, 2016) throughout the process and be able to demonstrate low-stress handling techniques and be confident discussing its benefits.

Case Study:

"Gin" a three year old entire female working gun dog Labrador had a traumatic tail tip injury following numerous incidents during the shooting season. Initially the tail was bandaged to promote healing and an antibacterial cream was applied. The owner was not keen on tail amputation so conservative management, including therapeutic laser and bandage changes, were utilised over the following weeks. After several weeks of unsuccessful conservative management, it was decided that amputation of 3 cm of her tail at the distal tip was necessary. Dressings, ranging from Allevyn to silver impregnated dressings were used following surgery and the wound was assessed every 48 hours to check for signs of infection. Unfortunately infection took hold during the healing process and antibiotics were then introduced (1.5 x 50mg Amoxycillin twice daily increasing to 1 x 500mg Amoxycillin twice daily). Once the healing process was established the wound was left open to granulate. At the onset of treatment Gin was compliant, however, as it progressed she began to withdraw whenever the bandage material was produced. To prevent this sign of anxiety developing a low-stress technique was devised to distract her during the treatment. Gin was provided with a lick mat, her body language changed remarkably on the production of this and negative associations were prevented from developing during the lengthy treatment and recovery. Following the use of this technique Gin was able to tolerate the bandage changes both at home and in the veterinary environment and no longer withdraw from the bandage materials.

"Gin" working: Image courtesy of S. Burton (S.B. Photography)

"Gin" being distracted during low-stress handling:
Image courtesy of Z. L. Goode (Bark Malvern Ltd)

Conclusion:

Veterinary nurses should play an active part in ensuring that patients are as comfortable as possible throughout the different procedures that they may encounter at the veterinary practice. Utilising opportunities for low-stress handling should always be considered, especially in situations that involve long or repeated treatments. Providing occasions during which the patient can become acclimatised to potentially stressful situations, can lead to decreased anxiety when being approached for treatment. Incorporating low-stress techniques could therefore lead to both the animal and the owner being more relaxed in the veterinary environment, leading to quicker and less stressful consultations. Veterinary professionals have a diverse range of low-stress techniques available to them and must ensure that they consider the individual animal throughout the process.

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